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(71) Applicant (for all designated States except US): GOSU-  
DARSTVENNOE NAUCHNOE UCHREZHDENIE  
"GOSUDARSTVENNY NAUCHNO-ISSLEDOVA-  
TELSKY INSTITUT PRIKLADNOI MECHANIKI  
I ELEKTRODINAMIKI" [RU/RU]; GSP-3, A-80,  
Volokolamskoe shosse, 4, Moscow, 125993 (RU).

(72) Inventors; and

(75) Inventors/Applicants (for US only): ANTROPOV,  
Nikolay Nikolaevich [RU/RU]; ul. Glagoleva, 30-3-231,  
Moscow, 123585 (RU). DIYAKONOV, Grigory Alexan-  
drovich [RU/RU]; ul. Sadovaya-Samotechnaya, 9-4,  
Moscow, 127473 (RU). ORLOV, Michail Michailovich  
[RU/RU]; Gurievsky proezd, 19-3-107, Moscow, 115597

(RU). POPOV, Garry Alekseevich [RU/RU]; 1-aya ul.  
8-go Marta, 3-104, Moscow, 125167 (RU). TYUTIN,  
Valery Konstantinovich [RU/RU]; ul. Katukova,  
13-3-415, Moscow, 123181 (RU). YAKOVLEV,  
Vladimir Nikolaevich [RU/RU]; ul. Moskovskaya,  
18-44, Chimki, Moskovskaya obi, 141400 (RU).

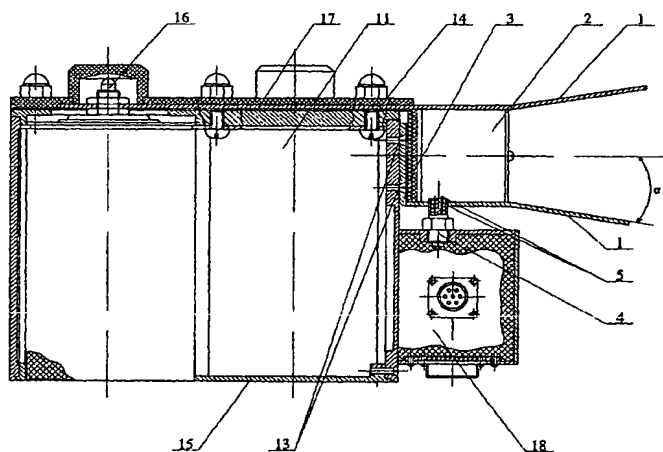
(74) Agent: MELYAN, Alexander Rubenovich; G-467, a/ya  
58, Moscow, 121467 (RU).

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(54) Title: PULSED PLASMA ACCELERATOR AND METHOD



(57) Abstract: A pulsed plasma accelerator comprises two electrodes (1) arranged between dielectric bars (2) made from an ablating material, a discharge channel with an open end part whose walls are defined by the surfaces of electrodes (1) and dielectric bars (2), an energy accumulator (11) and current supplies (14,15) for connecting the electrodes (1) with the energy accumulator (11). The current supplies (14, 15) define in conjunction with the electrodes (1) and the energy accumulator (11) an external electric circuit, with characteristics of the external electric circuit being selected on the condition:  $2 \leq C/L$ , where  $C$  ( $\mu\text{F}$ ) is the electric capacitance of the external electric circuit, and  $L$  is the inductance of the external electric circuit,  $L \leq 100$  nH. During operation of the plasma accelerator, quazi-nonperiodic pulse discharges are ignited and maintained in the discharge channel. By providing coordinated parameters of the external and internal circuits, a substantial increase in the efficiency of plasma acceleration is achieved.

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